

LANGSDORFIA (I. p. 230).

Langsdorfia francki (I. p. 231).

To the localities given, add :- MEXICO, Jalapa (*M. Trujillo*); GUATEMALA, in the city (*Rodriguez*); COSTA RICA, Candelaria Mts. (*Underwood*).

Langsdorfia forreri (I. p. 231).

To the locality given, add :—HONDURAS (*Wittkugel, in mus. Staudinger*).

ZEUZERA (I. p. 231).

2. **Zeuzera canadensis?**

Zeuzera canadensis, Herr.-Schäff. Samml. aussereur. Schmett. pp. 58, 79, fig. 168¹.

Hab. NORTH AMERICA, Quebec¹.—MEXICO, Cuesta de Misantla (*M. Trujillo*).

3. **Zeuzera masoni**. (Tab. LXXXVIII. fig. 21, ♂.)

Zeuzera masoni, Schaus, P. Z. S. 1894, p. 235 (♂)¹.

Hab. MEXICO, Jalapa (*coll. Schaus*)¹.

CRYPTOBIA (to follow the genus *Zeuzera*, I. p. 231).

Cryptobia, Herrich-Schäffer, Samml. aussereur. Schmett. p. 58 (1855).

1. **Cryptobia musæ.**

Cryptobia musæ, Herr.-Schäff. Samml. aussereur. Schmett. pp. 58, 79, fig. 165¹.

Hab. GUATEMALA, in the city (*Rodriguez*).—BRAZIL, Rio Grande¹.

One specimen.

Fam. ARBELIDÆ (to precede the family Hepialidæ, I. p. 231).

ARBELA.

Arbela, Moore, P. Z. S. 1879, p. 411; Hampson, Fauna Brit. Ind., Moths, i. p. 314.

1. **Arbela philobia**, sp. n. (Tab. LXXXIX. fig. 7, ♂.)

Male. Primaries and secondaries greyish-white; the primaries irrorated with brown at the base, along the costal margin, at the apex, and near the anal angle, with a small spot in the cell, one below it, and one on the inner margin all dark grey, and a large double black spot crossing close to the apex, beyond which the wing is clouded with black; the secondaries with the marginal line brown; the fringe of both wings greyish-white; the underside greyish-white, with the spots on the primaries very indistinct: head, front, and thorax black, the tegulæ grey, the abdomen and legs greyish-white, the antennæ and palpi pale brown. Expanse $1\frac{3}{4}$ inch.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

One specimen.

BIOL. CENTR.-AMER., Heter., Vol. II., April 1898.

3 mm

2. **Arbela norax**, sp. n. (Tab. LXXXIX. fig. 6, ♂.)

Male. Primaries silvery-grey, thickly irrorated with black scales, and with a large brown spot at the apex extending from the costal margin to the anal angle, edged with white on the inner side, the fringe brown; secondaries brown: head and front of the thorax black, the tegulæ, the base of the thorax, the abdomen, and legs greyish, the antennæ brown. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Jalapa (*M. Trujillo*).

One specimen.

3. **Arbela manes**, sp. n. (Tab. LXXXIX. fig. 8.)

Primaries greyish-white, crossed from the costal to the inner margin by very fine reddish-brown lines, and with two wide dark reddish-brown markings near the apex and outer margin, the fringe greyish-white; secondaries pale brown, the fringe cream-colour; the underside of both wings dark brown, with the fringe pale yellowish-grey: head, antennæ, and thorax greyish-brown, the abdomen brown. Expanse 2 inches.

Hab. PANAMA, Chiriqui (*mus. Staudinger*).

One specimen.

4. **Arbela tacita**, sp. n. (Tab. LXXXIX. fig. 9.)

Primaries pale reddish-fawn-colour, slightly irrorated with dark brown scales along the costal margin near the apex, and with a large reddish-brown spot (darker on the inner side) at the tip, below which are some white markings; secondaries dusky brown, paler in the cell and along the costal margin; the underside of both wings dark brown: head, antennæ, thorax, abdomen, and legs pale reddish-brown. Expanse $2\frac{1}{4}$ inches.

Hab. HONDURAS (*Wittkugel, in mus. Staudinger*).

One specimen.

5. **Arbela nais**, sp. n. (Tab. XC. figg. 1, ♂; 4, ♀.)

Male. Primaries pale fawn-colour, crossed from the costal to the inner margin by very fine waved slightly darker lines, and with a minute black dot at the end of each of the veins on the outer margin, and a narrow white streak extending from the base of the inner margin to the anal angle; secondaries rather darker fawn-colour, with a white streak on the costal margin; the underside of both wings very much as above: head, thorax, and abdomen fawn-colour, the collar and tegulæ edged with white, the anal tuft black at the tip; the legs fawn-colour above, white beneath.—*Female*. Very like the male, but with the secondaries white, showing the fine lines more distinctly. Expanse, ♂ $1\frac{3}{10}$, ♀ $1\frac{1}{10}$ inch.

Hab. COSTA RICA, La Uruca, San José (*coll. Dognin*).

DALACA (I. p. 232).

Dalaca assa (I. p. 232).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*).

2. **Dalaca sert**. (Tab. LXXXIX. fig. 2.)

Dalaca sert, Schaus, P. Z. S. 1894, p. 236 (♂)¹.

Hab. MEXICO, Jalapa (*coll. Schaus*¹).

Allied to *D. assa*, Druce. We figure Mr. Schaus's type.

3. **Dalaca terea.** (Tab. LXXXIX. fig. 3.)

Dalaca terea, Schaus, P. Z. S. 1892, p. 330¹.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*coll. Schaus*¹).

The type is figured.

PHASSUS (I. p. 232).

Phassus argentiferus (I. p. 233).

To the localities given, add:—MEXICO, Orizaba (*Flohr*), Jalapa, Cuesta de Misantla (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann*), Cuernavaca in Morelos (*H. H. Smith*); HONDURAS (*Wittkugel, in mus. Staudinger*).

Phassus triangularis (I. p. 233). (Tab. LXXXIX. fig. 1.)

To the locality given, add:—MEXICO, Orizaba (*Flohr*); GUATEMALA, in the city (*Rodriguez*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

We now figure a specimen of this species found by M. Trujillo at Jalapa, whence the type was obtained.

Phassus phalerus (I. p. 233).

To the locality given, add:—COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); HONDURAS (*Wittkugel, in mus. Staudinger*).

2 (A). **Phassus basirei.**

Phassus basirei, Schaus, Ent. Amer. vi. p. 46 (♀) (1890)¹.

Hab. MEXICO, Coatepec (*coll. Schaus*¹).

This species is very closely allied to *P. triangularis*, H. Edwards.

6. **Phassus marcius.** (Tab. LXXXIX. fig. 4.)

Phassus marcius, Druce, Ann. & Mag. Nat. Hist. (6) ix. p. 278 (1892)¹.

Primaries pale greyish-brown, thickly marked with grey and darker brown lines, with a double row of blackish-brown elongated spots crossing the wing from the costal margin near the apex to the inner margin, a row of curved lines extending round the outer margin from the apex to the anal angle, and a rather long metallic gold streak, broken into three spots at the end of the cell, beyond which, nearer the outer margin, are two very minute metallic gold dots; secondaries pale greyish-brown, paler at the base, with several indistinct darker markings on the costal margin near the apex: head, thorax, and abdomen pale greyish-brown. Expanse $4\frac{2}{10}$ inches.

Hab. MEXICO, near Durango city (*Becker*¹), Mineral del Monte in Hidalgo (*mus. Staudinger*).

A fine distinct species. Allied to *P. argentiferus*, Walk. The specimen in Dr. Staudinger's collection is labelled as having been found by Ehrenberg in 1835.

3 mm 2

7. *Phassus smithi*. (Tab. LXXXIX. fig. 5.)

Phassus smithi, Druce, Ann. & Mag. Nat. Hist. (6) iv. p. 92 (1889)¹.

Primaries pale fawn-colour, indistinctly mottled with a darker shade, with a few lunular-shaped markings near the apex and along the outer margin; secondaries uniformly reddish-fawn-colour, slightly streaked with paler colour along the costal margin near the apex; the underside of both wings pale fawn-colour: head and thorax reddish-fawn-colour, the abdomen and legs pale fawn-colour, the antennæ brown. Expanse $4\frac{4}{10}$ inches.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*¹).

One specimen, captured in May 1888. This species is allied to *P. championi*, but differs from it in colour and markings.

ICHTHYURA (to precede the genus *Cecrita*, I. p. 234).

Melalopha, Hübner, Tentamen, p. 1 (part.) (1810); Kirby, Cat. Lep. Het. i. p. 608.

Pygæra, Ochsenheimer, Schmett. Eur. iii. p. 224 (part.) (1810).

Ichthyura, Hübner, Verz. bek. Schmett. p. 162 (1816); Walker, Cat. v. p. 1054 (1855); Packard, Monogr. Bombyc. Moths of America north of Mexico, i. p. 123, t. 40. figg. 1-4 (neurulation) (1895).

Clostera, Stephens, Ill. Brit. Ent., Haust. ii. p. 12 (1828).

This genus is very fully described by Mr. Packard, though his statement that it is not represented in Asia or in the tropics is incorrect, some six or seven species being known from India, Japan, Ceylon, and Java.

1. *Ichthyura inornata*.

Ichthyura inornata, Neum. Papilio, ii. p. 134 (1882)¹; Pack. Ent. News, iv. p. 78²; Monogr. Bombyc. Moths of America north of Mexico, i. p. 130, t. 3. figg. 9-11³.

Melalopha inornata, Neum. & Dyar, Canad. Ent. xxv. p. 123⁴; Trans. Amer. Ent. Soc. xxi. p. 192⁵; Journ. New York Ent. Soc. ii. p. 115⁶.

Hab. NORTH AMERICA, South-eastern Arizona^{1 2 3}, Sonora (*Morrison, in mus. D.*).—MEXICO⁵, Guadalajara in Jalisco (*Goldsmith, in mus. D.*).

I have received one male and two females of this species from Mexico.

CECRITA (I. p. 234).

Cecrita biundata (I. p. 234).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*).

3. *Cecrita remuria*, sp. n. (Tab. XC. fig. 5, ♂.)

Male. Primaries sage-green, irrorated with yellow scales, a zigzag black line crossing the wing at the end of the cell from the costal to the inner margin, beyond which is a curved black line with some black on the outer side of it, the fringe green; secondaries with the costal half sage-green, irrorated with yellow, and with the black zigzag line continued from the primaries, the inner half of the wing pale fawn-colour, slightly dusky along the inner margin; the underside of both wings uniformly greyish-white: head,

antennæ, and thorax greenish-black, the abdomen yellowish-brown, the anus green.—*Female*. Very similar to the male, but considerably larger and rather paler in colour. Expanse $2\frac{1}{4}$ inches.

Hab. MEXICO, Orizaba (*coll. Schaus*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

Allied to *C. viridescens* (Walk.).

CEDEMASIA (I. p. 234).

Cedemasia seriata (I. p. 235).

To the localities given, add:—MEXICO, Guadalajara (*Goldsmith, in mus. D.*), Coatepec (*Brooks*); COSTA RICA, Candelaria Mts. (*Underwood*).

2. *Cedemasia* (?) *alcimede*. (Tab. XC. fig. 2, ♂.)

Cedemasia (?) *alcimede*, Druce, P. Z. S. 1890, p. 510¹.

Male. Primaries dark brown, with a reddish-brown spot and two yellow lines close to the base, a row of greyish-white spots crossing the wing beyond the middle from the costal to the inner margin, and a submarginal row of greyish spots with black points extending from the apex to the anal angle, the fringe dark brown; secondaries uniformly dark brown, the fringe rather paler; the underside brown, with the costal margin of both wings and the fringe yellowish: head, collar, thorax, and antennæ dark brown, the tegulæ golden-brown; the abdomen dark brown above, pale yellowish-white beneath; the legs yellowish-white.—*Female*. Considerably larger than the male and of a much duller colour, the primaries without the greyish and yellow lines and with the base much paler; the underside of a more uniform dusky brown. Expanse, ♂ $1\frac{1}{4}$, ♀ $1\frac{3}{4}$ inch.

Hab. PANAMA, Volcan de Chiriqui (*Champion: ♂¹*), Chiriqui (*Ribbe, in mus. Staudinger: ♂ ♀¹*).—ECUADOR, Sarayacu (*Buckley, in mus. D.: ♀¹*).

A very distinct species, of which both sexes are contained in Dr. Staudinger's collection. A male from the Volcan de Chiriqui is figured.

3. *Cedemasia duronia*, sp. n. (Tab. XC. fig. 3, ♂.)

Male. Primaries pale brownish-fawn-colour, crossed near the base by a narrow white line edged on the outer side with dark brown, beyond which are two indistinct rows of small black dots extending from the costal margin near the apex to the middle of the inner margin, a submarginal row of small black dots edged with white on the inner side extending from the apex to the anal angle, the fringe pale brownish-fawn-colour; secondaries dark brown, the fringe paler; the underside of both wings dark reddish-brown: head, antennæ, thorax, abdomen, and legs brownish-fawn-colour. Expanse $1\frac{3}{4}$ inch.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen.

4. *Cedemasia terrena*. (Tab. XC. fig. 6, ♂.)

Cedemasia terrena, Schaus, P. Z. S. 1892, p. 331¹.

Notodonta (?) *dares*, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 356 (1894)².

Hab. MEXICO, Coatepec (*coll. Schaus¹*), Orizaba (*Boucard, in mus. D.²*); COSTA RICA, Candelaria Mts. (*Underwood*).

We figure a male from Orizaba. *C. terrena* is probably a dark form of the following species, *C. xylinata*. The females of both insects are very similar to the males.

5. **Ædemasia xylinata.** (Tab. XC. fig. 7, ♀.)

Nystalea xylinata, Walk. Cat. xxxiii. p. 759 (♂) (1865)¹.

Nycterotis pæcila, Feld. Reise der Nov., Lep. t. 97. fig. 20².

Ædemasia maxtla, Schaus, P. Z. S. 1892, p. 331³.

Notodonta (?) *pythia*, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 356 (♂) (1894)⁴.

Hab. MEXICO, Coatepec (*coll. Schaus*³), Orizaba (*Boucard, in mus. D.*⁴), Jalapa (*M. Trujillo*).—COLOMBIA, Bogota¹; VENEZUELA².

We figure a female of this species from Jalapa. The type of *Nystalea xylinata*, Walk., is now in my own collection.

SCHIZURA (to follow the genus *Ædemasia*, I. p. 235).

Schizura, Doubleday, Ent. i. p. 59 (1841).

Cælodasys, Packard, Proc. Ent. Soc. Phil. iii. p. 363 (1864).

1. **Schizura tonac.** (Tab. XC. fig. 8.)

Cælodasys tonac, Schaus, P. Z. S. 1892, p. 330.

Hab. MEXICO, Paso de San Juan (*coll. Schaus*).

The type is figured.

DASYLOPHIA (to precede the genus *Edema*, I. p. 235).

Dasylophia, Packard, Proc. Ent. Soc. Phil. iii. p. 362 (1864); Monogr. Bombyc. Moths of America north of Mexico, i. p. 172, t. 42. figg. 5, 5 a, 6 (neurulation).

Hatima, Walker, Cat. xxxii. p. 450 (1865).

1. **Dasylophia deba.** (Tab. XC. fig. 10.)

Hatima deba, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 358 (1894)¹.

Primaries fawn-colour, shaded with reddish-brown at the base and along the inner margin almost to the anal angle; secondaries pale brown; the fringe of both wings fawn-colour: head and thorax greyish-brown, the antennæ and legs brown, the abdomen pale yellowish-brown. Expanse 1½ inch.

Hab. MEXICO, Jalapa (*M. Trujillo*¹).

Two specimens.

2. **Dasylophia zethus**, sp. n. (Tab. XC. fig. 11, ♀.)

Female. Primaries silvery-grey, darker at the base and along the costal margin, the wing being here slightly shaded with brown, a pale indistinct reddish-brown spot at the end of the cell, and a submarginal row of reddish-brown spots extending from the apex to the anal angle; secondaries greyish-white, shaded with greyish-brown at the apex and round the outer margin: head and thorax greyish-brown, the tegulæ silvery-grey, the abdomen pale greyish-brown, the antennæ brown. Expanse 1½ inch.

Hab. MEXICO, Jalapa (*coll. Schaus*).

One specimen.

EDEMA (I. p. 235).

Edema mandela (I. p. 235).

To the Mexican locality given, add:—Jalapa (*M. Trujillo*), Temax in Northern Yucatan (*Gaumer*).

4. **Edema lanassa.** (Tab. XC. fig. 9, ♂.)

Edema lanassa, Druce, P. Z. S. 1890, p. 509¹.

Male. Primaries olive-green, mottled with dark brown along the costal margin and beyond the cell, a silvery-white spot and streak at the end of the cell, beyond which is a yellowish mark and a row of submarginal minute black dots, the fringe olive-brown; secondaries dark brown, paler at the base, the fringe pale greyish-brown; the underside of the primaries pale brown, with a marginal row of black dots near the apex, that of the secondaries greyish-brown, broadly bordered with darker brown round the outer margin: head, thorax, and anus olive-green; the abdomen dark brown above, pale greyish-brown beneath; the legs pale greyish-brown; the antennæ dark brown; the palpi olive-green, the terminal joint black.—*Female*. Similar to the male, but larger and rather paler in colour. Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*¹).

Allied to *E. pulchra*, Butl., from the Amazons.

5. **Edema alata.** (Tab. XC. figg. 12, ♂.)

Edema alata, Druce, P. Z. S. 1890, p. 510¹.

Male. Primaries very pale greyish-fawn-colour, speckled along the costal margin and beyond the cell with small brown streaks, a row of very minute brown spots crossing the wing from the apex to about the middle of the inner margin, and several black dots close to the base; secondaries greyish-white, darker at the apex and round the outer margin; the underside as above, but paler, and with the spots on the primaries entirely absent: head, thorax, abdomen, and legs pale fawn-colour, the antennæ dark brown. Expanse $1\frac{1}{2}$ inch.

Hab. HONDURAS (*Wittkugel, in mus. Staudinger*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*¹).

6. **Edema purpurascens.**

Amphipyra purpurascens, Butl. Trans. Ent. Soc. Lond. 1879, p. 37¹.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—AMAZONS, Manaos¹.

This species varies greatly in size and colour. The type is in the National Collection.

7. **Edema anica**, sp. n. (Tab. XC. fig. 13, ♂.)

Male. Primaries reddish-fawn-colour, darker on the costal half, and crossed from the costal to the inner margin by fainter fawn-coloured waved lines, and also by two rows of small black dots beyond the middle, the fringe alternately light and dark brown; secondaries dark brown, the fringe paler: head, antennæ, abdomen, and legs dark brown, the thorax clothed with long fawn-coloured hairs. Expanse $1\frac{3}{4}$ inch.

Hab. PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

8. **Edema morona**, sp. n. (Tab. XC. fig. 14, ♂.)

Male. Primaries pale greyish-brown, partly crossed near the base from the costal to the inner margin by a wide dark brown band, and beyond the cell by two very indistinct rows of minute black dots with lighter spots on the inner side; secondaries pale brown, darker from the apex to the anal angle; the fringe pale greyish-brown; the underside of both wings very pale, without markings: head, thorax, abdomen, and legs pale greyish-brown, the antennæ dark brown. Expanse $1\frac{3}{4}$ inch.

Hab. COSTA RICA, Candelaria Mts. (*Underwood*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*), Obispo (*Salvin, in Mus. Brit.*).

Our figure and description are taken from the specimen from Chiriqui in Dr. Staudinger's collection, it being in much better condition than either of the others.

9. **Edema tlotzin.** (Tab. XC. fig. 15, ♀.)

Edema tlotzin, Schaus, P. Z. S. 1892, p. 332 (♀)¹.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*coll. Schaus*¹).

The type is figured.

10. **Edema astuta.**

Edema astuta, Schaus, P. Z. S. 1894, p. 242¹.

Hab. MEXICO, Jalapa (*coll. Schaus*¹).—VENEZUELA, Aroa¹.

LEPTOSPHECTA (I. p. 236).

Leptosphetta rabdina (I. p. 236).

To the localities given, add:—BRITISH HONDURAS, Belize (*Sir Alfred Moloney, in mus. D.*).

MAGAVA (to follow the genus *Leptosphetta*, I. p. 236).

Magava, Walker, Cat. xxxii. p. 503 (1865).

1. **Magava multilinea.** (Tab. XC. fig. 16, ♀.)

Magava multilinea, Walk. Cat. xxxii. p. 503¹.

Hab. COSTA RICA, La Uruca, San José (*in coll. Dognin*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

Described by Walker from a specimen in the Norris collection, and the locality given¹ is "Limas." The type is now in the National Museum. I have specimens of both sexes before me, the female being very similar to the male. We figure a female from Chiriqui.

CEROCTENA (to precede the genus *Lochmæus*, I. p. 236).

Ceroctena, Guenée, Sp. gén. des Lép. v. p. 9 (1852); Möschler, Verh. zool.-bot. Ges. Wien, xxx. p. 469 (1880).

Guenée places this genus in the Noctuidæ; it is without doubt a Notodont.

1. **Ceroctena agatha.**

Ceroctena agatha, Möschl. Verh. zool.-bot. Ges. Wien, 1880, p. 470, t. 9. fig. 21¹.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—GUIANA, Paramaribo¹; UPPER AMAZONS.

2. *Ceroctena violascens*.

Oligocentria violascens, Herr.-Schäff. Samml. aussereur. Schmett. p. 66, fig. 385¹.

Notodonta violascens, Herr.-Schäff. loc. cit. p. 82².

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—BRAZIL.

There are two specimens of this species from Chiriqui, apparently male and female, in Dr. Staudinger's collection. No locality is mentioned by Herrich-Schäffer¹.

LOCHMÆUS (I. p. 236).

Lochmæus albosigma (I. p. 236). (Tab. XC. fig. 17.)

To the locality given, add:—MEXICO, Jalapa (*M. Trujillo*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

The type from the Volcan de Atitlan is now figured.

HETEROCAMPA (I. p. 236).

9. *Heterocampa satis*, n. n.

Heterocampa punctata, anteà, i. p. 238 (nec Cram.).

The name *punctata* is preoccupied in this genus by a species of Cramer's; a new one is therefore required for the Central-American insect described by me under that name.

10. *Heterocampa argentata*. (Tab. XC. fig. 18, ♂.)

Heterocampa argentata, Druce, Ann. & Mag. Nat. Hist. (6) xv. p. 49 (1895)¹.

Male. Primaries silvery-grey, the costal and inner margins and the veins near the inner margin spotted with black, a rather large black spot close to the anal angle, the fringe alternately black and grey; secondaries pale greyish-fawn-colour, dusky at the apex and round the outer margin, a small black spot at the anal angle: head, thorax, and tegulæ silvery-grey, the antennæ yellowish-brown, the abdomen greyish-fawn-colour, the legs grey. Expanse $2\frac{1}{4}$ inches.

Hab. COSTA RICA¹, Candelaria Mts. (*Underwood*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

This fine species is allied to an undescribed Venezuelan insect in my own collection.

11. *Heterocampa montana*, sp. n. (Tab. XC. fig. 19, ♂.)

Male. Primaries grey, greenish at the base and along the inner margin, a dark brown spot on the costal margin near the apex, and a fine brown marginal line extending from the apex to the anal angle, the fringe dark grey; secondaries reddish-brown, the fringe paler; the underside of both wings pale greyish-brown: head and thorax grey, the abdomen brown, the antennæ dark brown, the legs pale greyish-brown. Expanse $1\frac{3}{4}$ inch.

Hab. COSTA RICA, Candelaria Mts. (*Underwood*).

One specimen. Allied to *H. argentata*, Druce, but much smaller, with the primaries darker grey and the secondaries reddish-brown.

12. **Heterocampa daona.** (Tab. XC. fig. 20, ♀.)

Heterocampa daona, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 357 (1894)¹.

Primaries greyish-brown, shaded with pink at the base and along part of the costal margin, a greyish-white band crossing the wing about the middle, beyond which is an ill-defined eye-like spot; secondaries white, the inner and outer margins and the fringe grey: head, thorax, and abdomen greyish-brown. Expanse 2 inches.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*¹), Yucatan (*in mus. Staudinger: ♂*); COSTA RICA, Candelaria Mts. (*Underwood*).

The Costa Rican specimen is figured; it is larger than the type, and has the primaries more distinctly marked.

13. **Heterocampa crossæa.** (Tab. XC. fig. 21, ♂.)

Heterocampa (?) *crossæa*, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 357 (1894)¹.

Male. Primaries dark brown, paler near the anal angle, crossed from the costal to the inner margin beyond the middle by several narrow, waved, pale greyish-brown lines, the fringe pale brown; secondaries white, with a large dark brown square-shaped spot at the anal angle: head and thorax brown, the tegulæ pale greyish-brown, the abdomen greyish-brown. Expanse $1\frac{3}{4}$ inch.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*¹).

One specimen.

14. **Heterocampa aconthea**, sp. n. (Tab. XC. fig. 24, ♂.)

Male. Primaries dark brown, streaked between the veins with paler brown; secondaries dark brown, with a black spot at the anal angle, the fringe yellowish: head, antennæ, thorax, abdomen, and legs dark brown. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Orizaba (*coll. Schaus: ♀*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger: ♂*).

We figure the male from the Volcan de Chiriqui. The female is very similar, but rather larger.

15. **Heterocampa** (?) **nea**, sp. n. (Tab. XC. fig. 22, ♂.)

Male. Primaries pinkish-brown, shaded with darker brown along the costal, outer, and inner margins, with a dark brown spot at the end of the cell, from which a brown streak extends to the outer margin, and a row of minute black dots crossing the wing beyond the middle from the costal to the inner margin, the fringe light and dark brown; secondaries pale brownish-grey, broadly bordered from the apex to the anal angle with blackish-brown, the outer margin edged with reddish-brown, the fringe alternately brown and fawn-colour: head and front of the thorax fawn-colour, the rest of the thorax, the abdomen, and legs brown. Expanse $1\frac{3}{4}$ inch.

Hab. PANAMA, Chiriqui (*mus. Staudinger*).

One specimen.

16. **Heterocampa sagana.** (Tab. XC. fig. 23, ♂.)

Heterocampa sagana, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 357 (1894)¹.

Male. Primaries from the base to the middle of the costal margin grey, the outer half of the wing fawn-colour, the inner margin and a large marking beyond the cell thickly irrorated with green scales, the fringe

brown; secondaries uniformly pale reddish-fawn-colour: head, thorax, and tegulæ grey; abdomen fawn-colour, with a central black line extending from the base to the anus; antennæ dark brown. Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One specimen.

17. **Heterocampa læca.** (Tab. XCI. fig. 2, ♂.)

Heterocampa læca, Schaus, P. Z. S. 1892, p. 333 (♂)¹.

Hab. MEXICO, Jalapa (*coll. Schaus*); HONDURAS (*Wittkugel, in mus. Staudinger*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).—BRAZIL, Rio Janeiro¹.

The Honduras specimen is figured. The one from the Volcan de Chiriqui has the primaries of a browner grey, with the dark marks smaller and much less distinct.

18. **Heterocampa(?) pylaon**, sp. n. (Tab. XCI. fig. 1, ♂.)

Male. Primaries olive-grey, white along the costal margin, with black spots on the latter from which waved darker olive-green lines cross the wing to the inner margin, two black spots and a white streak close to the anal angle, and a submarginal row of black dots extending from the apex to the anal angle, the fringe olive-grey; secondaries very pale fawn-colour, clothed with pale yellowish hairs along the inner margin; the underside of both wings uniformly greyish-white: head and thorax green, the collar white edged with black, the tegulæ olive-grey, the antennæ yellowish-brown, the abdomen greyish-brown, the anus fawn-colour. Expanse $1\frac{3}{4}$ inch.

Hab. HONDURAS (*Wittkugel, in mus. Staudinger*).

One specimen.

19. **Heterocampa punctata.**

Phalæna Bombyx punctata, Cram. Pap. Exot. iv. p. 36, t. 307. fig. F¹.

Tifama(?) punctata, Walk. Cat. vii. p. 1752².

Hab. MEXICO, Orizaba (*coll. Schaus*); PANAMA, Chiriqui (*mus. Staudinger*).—GUIANA, Surinam^{1 2}.

20. **Heterocampa(?) leona**, sp. n. (Tab. XCI. fig. 6, ♂.)

Male. Primaries dark brown, bordered on the costal margin with paler brown, with a small white spot at the base of the cell, joined to another larger spot at the end of it by a fine white line; secondaries dark brown; the underside of both wings uniformly reddish-brown: head, antennæ, thorax, abdomen, and legs dark brown.—*Female.* Very similar to the male, but with simple instead of pectinated antennæ. Expanse, ♂ ♀, $1\frac{3}{4}$ inch.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

Three specimens. This insect will possibly form the type of a new genus.

21. **Heterocampa(?) pyrrha**, sp. n. (Tab. XCI. figg. 4, ♂; 5, ♀.)

Male. Primaries greyish-brown, shaded with darker brown, and crossed from the costal to the inner margin by two zigzag black lines—the first near the base, the second beyond the middle,—a few black spots near the apex, the marginal line black, the fringe greyish-brown; secondaries blackish-brown: head, antennæ,

and thorax dark greyish-brown, the abdomen yellowish-brown.—*Female*. Very similar to the male, but larger and paler. Expanse, ♂ $1\frac{3}{4}$, ♀ 2 inches.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), State of Jalisco (*Richardson*).

A male and female from the State of Jalisco are figured; those from Presidio are in very bad condition.

22. *Heterocampa* —?

Hab. MEXICO, Coatepec (*Brooks*).

Two imperfect specimens, unsuitable for description.

23. *Heterocampa* —?

Hab. COSTA RICA, Candelaria Mts. (*Underwood*).

Two specimens, also in worn condition.

SYMMERISTA (I. p. 239).

Symmerista distinguenda (I. p. 239).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*); GUATEMALA, in the city (*Rodriguez*); COSTA RICA, Candelaria Mts. (*Underwood*).

In Dr. Staudinger's collection there is a specimen from Chiriqui (whence I have already recorded the insect) considerably smaller than any of the others before me, with the secondaries darker; it may belong to another species.

Symmerista lineata (I. p. 240).

To the locality given, add:—MEXICO, Orizaba (*Flohr*), Jalapa (*M. Trujillo*); GUATEMALA, in the city (*Rodriguez*); COSTA RICA, Candelaria Mts. (*Underwood*).

5. *Symmerista alba*, sp. n. (Tab. XCI. fig. 3, ♂.)

Male. Primaries white, thickly irrorated with minute black scales, and crossed beyond the middle from the costal to the inner margin by a narrow waved black line, a zigzag black submarginal line extending from the apex to the anal angle, the fringe white; secondaries white, clothed with yellowish hairs at the base and along the inner margin; the underside of both wings silky-white: head, thorax, and abdomen greyish-white, the antennæ pale yellowish-brown. Expanse 2 inches.

Hab. PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

One specimen.

ROSEMA (I. p. 240).

Rosema deolis (I. p. 240).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*), Coatepec (*Brooks*), Teapa in Tabasco (*H. H. Smith*).

Rosema æthra (I. p. 241).

To the locality given, add:—MEXICO, Orizaba (*Boucard, in mus. D.*).

5. *Rosema epigena*.

Phalæna Bombyx epigena, Stoll, Suppl. Cram. Pap. Exot. v. p. 72, t. 16. figg. 1 (larva), 1 A (pupa), 1 B¹.

Rosema epigena, Walk. Cat. v. p. 1170².

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).—GUIANA, Surinam^{1 2}.

6. *Rosema apicalis*.

Rosema apicalis, Walk. Cat. v. p. 1169¹.

Hab. HONDURAS (*Dyson*¹).—BRAZIL, Cabo (*mus. D.*).

7. *Rosema thestia*, sp. n. (Tab. XCI. fig. 8, ♂.)

Male. Primaries dull green, with a small brown spot at the end of the cell, the outer margin from the apex almost to the anal angle broadly bordered with brownish-black, a white spot on the inner margin close to the base; secondaries brownish-black, paler at the base: head and tegulæ dull green, the antennæ, thorax, and abdomen dark brown. Expanse $1\frac{1}{2}$ inch.

Hab. PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

One specimen. This species differs from all the other known members of the genus in having the secondaries brownish-black instead of white or fawn-colour.

CERURA (I. p. 241).

2. *Cerura rarata*. (Tab. XCI. fig. 7, ♂.)

Cerura rarata, Walk. Cat. xxxii. p. 409 (1865)¹; Kirby, Cat. Lep. Het. i. p. 588².

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, in the city (*Rodriguez*).—SOUTH AMERICA, Callao².

A specimen from Jalapa is figured. No locality is given by Walker¹.

3. *Cerura dandon*. (Tab. XCI. fig. 9, ♂.)

Harpyia dandon, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 358 (♂) (1894)¹.

Male. Primaries and secondaries white; the primaries blotched with black along the costal margin at the apex, and on the inner margin, the fringe alternately black and white: head and collar yellow, the antennæ black; thorax white, with the front black; abdomen black, with the underside, sides, and anus white. Expanse $1\frac{3}{4}$ inch.

Hab. MEXICO, Jalapa (*M. Trujillo*); COSTA RICA, Candelaria Mts. (*Underwood*).

A Costa Rican specimen is figured.

4. *Cerura platea*.

Dicranura platea, Schaus, Ent. Amer. vi. p. 46 (♀) (1890)¹.

Hab. MEXICO, Jalapa (*coll. Schaus*¹).

5. *Cerura* (?) *rhotana*. (Tab. XCI. fig. 14, ♂.)

Colocasia rhotana, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 354 (1894)¹.

Male. Primaries grey, crossed about the middle from the costal to the inner margin by a wide broken black band, beyond which are two fine waved black lines, the marginal line black, the fringe grey; secondaries

dark greyish-black, the fringe white: head and thorax grey, the abdomen blackish-grey, the legs white, banded with black, the antennæ brown.—*Female*. Very similar to the male. Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*¹), Jalapa (*M. Trujillo*¹); GUATEMALA, Cahabon (*Champion*¹), Guatemala city (*Rodriguez*¹).

A male from Orizaba is figured.

6. **Cerura tenuis**. (Tab. XCI. figg. 16, ♂; 18, ♀.)

Harpyia (?) *tenuis*, Schaus, P. Z. S. 1892, p. 336¹.

Hab. PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).—BRAZIL, Petropolis¹.

ETOBESA (I. p. 242).

Etobesa xylinoidea (I. p. 242).

To the localities given, add:—COSTA RICA, Candelaria Mts. (*Underwood*).

MOURALIA (to follow the genus *Etobesa*, I. p. 242).

Mouralia, Walker, Cat. xv. p. 1803 (1858).

1. **Mouralia annulifera**. (Tab. XCI. fig. 10.)

Mouralia annulifera, Walk. Cat. xv. p. 1803¹.

Hab. MEXICO, Jalapa (*M. Trujillo*).—SAN DOMINGO¹.

PHYA (I. p. 242).

2. **Phya dela**. (Tab. XCI. fig. 15, ♂.)

Phya dela, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 355 (1894)¹.

Male. Primaries pale fawn-colour, the costal margin from the base almost to the apex shaded with reddish-brown, with two small black streaks close to the apex, and a wide reddish-fawn-coloured band extending down the middle from the base to the outer margin, the anal angle shaded with dark reddish-brown, the fringe pale fawn-colour; secondaries creamy-white, slightly darker along the inner margin, with a small brown spot at the anal angle, the fringe cream-colour; the underside of both wings creamy-white, the costal margin of the primaries shaded with dark brown: tegulae dark grey, the abdomen fawn-colour, the legs reddish-brown. Expanse 2 inches.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*¹), Jalapa (*M. Trujillo*¹).

Allied to *P. laciniosa*, but differing from it in having a central reddish-fawn-coloured band on the primaries. A male from Orizaba is figured.

3. **Phya salona**. (Tab. XCI. fig. 13, ♂.)

Phya salona, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 356 (1894)¹.

Male. Primaries pinkish-fawn-colour, shaded with brown along the inner margin from the base to the anal angle, a submarginal black waved line extending from the apex along the outer margin almost to the anal angle, and then partly crossing the wing towards the base, the outer margin pale yellowish-fawn-colour, with two very fine marginal black lines; secondaries white, with the costal and inner margins

fawn-colour: head, antennæ, and thorax brownish-fawn-colour, the abdomen fawn-colour. Expanse 2 inches.

Hab. MEXICO, Coatepec (*Brooks*¹); GUATEMALA (*Rodriguez, in coll. Candèze*).

I have now seen two specimens of this species, both males.

4. *Phya phraortes*. (Tab. XCI. figg. 11, ♂; 12, ♀.)

Dicentria phraortes, Druce, Ann. & Mag. Nat. Hist. (6) iv. p. 93 (1889)¹.

Male. Primaries cream-colour, shaded with brown along the costal margin; secondaries white, slightly hyaline, the fringe yellowish: head, thorax, and abdomen pale brown, the antennæ brown.—*Female*. Primaries dark purplish-brown, with several black streaks near the anal angle; secondaries dusky white: head, antennæ, and thorax brown; the tegulæ and abdomen pale fawn-colour. Expanse, ♂ 1½, ♀ 2⅔ inches.

Hab. MEXICO, Coatepec (*Brooks*¹), Jalapa (*coll. Dognin*¹), Vera Cruz (*H. H. Smith*).

This species is allied to *P. dela*, Druce. We have a good series of both sexes before us, showing very little variation.

5. *Phya* —?

Hab. COSTA RICA, Candelaria Mts. (*Underwood*).

Two specimens, in very bad condition.

NOTODONTA (to follow the genus *Phya*, I. p. 242).

Notodonta, Ochsenheimer, Schmett. Eur. iii. p. 45 (1810); Kirby, Cat. Lep. Het. i. p. 599.

1. *Notodonta dara*. (Tab. XCII. fig. 1.)

Stilpnotia (?) *dara*, Druce, Ann. & Mag. Nat. Hist. (6) xiii. p. 355 (1894)¹.

Primaries and secondaries uniformly silky mouse-colour: head and thorax yellowish-brown, the thorax thickly clothed with long yellowish hairs; abdomen brown, banded with yellow; antennæ yellowish-brown. Expanse 2½ inches.

Hab. MEXICO, Orizaba (*Boucard, in mus. D.*¹).

One specimen, which is now figured.

TIFAMA (I. p. 242).

Tifama (?) *truncata* (I. p. 243).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*); COSTA RICA, Santa Clara Valley (*Zürcher*).

3. *Tifama* (?) *dardania*. (Tab. XCI. fig. 17, ♀.)

Tifama (?) *dardania*, Druce, Ann. & Mag. Nat. Hist. (6) xv. p. 49 (1895)¹.

Female. Primaries with the base and the costal margin nearly to the apex dark brown, shading inwardly to about the middle to bright reddish-brown, where it is thickly irrorated with white scales, the wing from the centre to the outer margin pale primrose-colour, the apex almost pink, two small dark yellow spots on the middle of the outer margin, the fringe primrose-colour, excepting at the apex, where it is almost pink; secondaries greyish-brown, shading to pale primrose-colour on the outer margin, the fringe primrose-colour: head and antennæ reddish-brown; collar pale yellow, shot with reddish-brown; tegulæ silvery-

grey; thorax and abdomen brown, the latter with the sides and anus yellow; legs brown. Expanse 3 inches.

Hab. HONDURAS (*Wittkugel, in mus. Staudinger*); COSTA RICA¹, Candelaria Mts. (*Underwood*).

Two specimens. The one from Honduras is considerably paler than the Costa Rican type.

HAPIGIA (I. p. 243).

3. *Hapigia licormas*.

Phalæna Noctua licormas, Cram. Pap. Exot. i. p. 117, t. 74. fig. E (1775)¹.

Hapigia (?) — ?, anteà, i. p. 244.

To the locality given, add:—MEXICO, Orizaba (*Boucard, in mus. D.*); COSTA RICA, Candelaria Mts. (*Underwood*); PANAMA, Volcan de Chiriqui (*Trötsch, in mus. Staudinger*).

Hapigia ribbei (I. p. 244).

To the locality given, add:—MEXICO, Orizaba (*Flohr; Boucard, in mus. D.*).

5. *Hapigia xolotl*. (Tab. XCI. fig. 19.)

Hapigia xolotl, Schaus, P. Z. S. 1892, p. 339¹.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*coll. Schaus*¹).

The type is figured.

COLAX (to follow the genus *Hapigia*, I. p. 244).

Colax, Hübner, Verz. bek. Schmett. p. 141 (1816).

1. *Colax apulus*.

Sphinx apulus, Cram. Pap. Exot. i. p. 139, t. 88. fig. E¹.

Colax apulus, Hübn. Verz. bek. Schmett. p. 141².

Smerinthus (?) *apulus*, Walk. Cat. viii. p. 255³.

Hab. PANAMA, Chiriqui (*Ribbé, in mus. D.*).—GUIANA, Surinam^{1 3}; BRAZIL, Rio Janeiro.

DATANA (I. p. 245).

Datana integerrima (I. p. 245).

To the localities given, add:—MEXICO, Durango city (*Becker*); GUATEMALA, in the city (*Rodriguez*).

LIRIMIRIS (I. p. 245).

The single species referred by me to this genus, *L. albolineata*, Druce, from Panama, belongs to *Blera*, Walk., the type of which, *B. ceruroides*, Walk., from Rio Janeiro, is contained in Mr. Fry's collection. Two Central-American species are, however, now known to me.